U.S. Application No.: 09/883,220

Attorney Docket No.: Q65032

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1. (Canceled)

2. (Previously Presented) A bi-stable microswitch including a pair of contacts and an

armature movable between a first position and a second position to selectively break or make the

pair of contacts, the armature being latched in the second position by a magnetic path including a

permanent magnet and a magnetisable element having a first temperature, wherein the armature

is resiliently biased towards the first position when latched, and is movable from the second

position to the first position upon heating of the magnetisable element to above the first

temperature,

wherein the armature includes a first section having a first thermal expansion coefficient

and a second section having a second thermal expansion coefficient causing movement of the

armature from the first position to the second position upon heating of the armature.

3. (Original) A bi-stable microswitch according to claim 2, wherein the first section of

the armature is at least partially formed of permalloy.

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4. (Previously Presented) A bi-stable microswitch according to claim 2, wherein the

second section of the armature is at least partially formed of invar.

5. (Currently Amended) A bi-stable microswitch according to claim 2, and further

including a first heating device formed on or proximate the armature.

6. (Previously Presented) A bi-stable microswitch according to claim 5 and further

including a second heating device formed on or proximate the magnetisable element.

7. (Previously Presented) A bi-stable microswitch according to claim 6, wherein one or

more of the first and second heating devices includes an electrical resistance element.

8. (Previously Presented) A bi-stable microswitch including a pair of contacts and an

armature movable between a first position and a second position to selectively break or make the

pair of contacts, the armature being latched in the second position by a magnetic path including a

permanent magnet and a magnetisable element having a first temperature, wherein the armature

is resiliently biased towards the first position when latched, and is movable from the second

position to the first position upon heating of the magnetisable element to above the first

temperature,

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wherein heat is applied to at least one of the armature and the magnetisable element by

means of electromagnetic radiation.

9. (Original) A bi-stable microswitch according to claim 8, wherein microwave or other

radiation is applied by non-contact means from a remote location.

10. (Previously Presented) A bi-stable microswitch including a pair of contacts and an

armature movable between a first position and a second position to selectively break or make the

pair of contacts, the armature being latched in the second position by a magnetic path including a

permanent magnet and a magnetisable element having a first temperature, wherein the armature

is resiliently biased towards the first position when latched, and is movable from the second

position to the first position upon heating of the magnetisable element to above the first

temperature,

wherein the magnetisable element is at least partially formed from a NiCu alloy, the

composition of the alloy being adjusted to set the first temperature.

11. (Previously Presented) A bi-stable microswitch according to claim 2, wherein the

pair of contacts are formed in or on an electrically isolating substance.

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12. (Original) A bi-stable microswitch according to claim 11, wherein the magnetisable

element is formed in the substrate, and separated from the pair of contacts by an electrically

isolating layer formed in or on the substrate.

13. (Original) A bi-stable microswitch according to claim 12, wherein the pair of

contacts and the magnetisable layer are formed by micro machining techniques.

14. (Previously Presented) A bi-stable microswitch including a pair of contacts and an

armature movable between a first position and a second position to selectively break or make the

pair of contacts, the armature being latched in the second position by a magnetic path including a

permanent magnet and a magnetisable element having a first temperature, wherein the armature

is resiliently biased towards the first position when latched, and is movable from the second

position to the first position upon heating of the magnetisable element to above the first

temperature,

wherein the armature comprises a cantilever overhanging the pair of contacts.

15. (Original) A bi-stable microswitches according to claim 14, wherein the armature is

formed by micromachining techniques.

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16. (Previously Presented) An array of bi-stable microswitches, each microswitch

having features according to claim 2.

17. (Original) An array of bi-stable microswitches according to claim 16, wherein each

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of the microswitches is at least partly formed in a common substrate by micro machining

techniques.

18. (New) A bi-stable microswitch according to claim 10, further comprising a first

heating device formed on the armature.

19. (New) A bi-stable microswitch according to claim 14, further comprising a first

heating device formed on the armature.